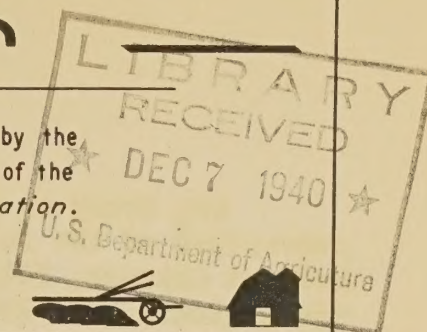


news letter

Bureau of Agricultural Chemistry and Engineering of the
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No. 5.

E. K. NELSON DIES

Elnathan Kemper Nelson, senior chemist in the Agricultural Chemical Research Division, Bureau of Agricultural Chemistry and Engineering, died at Washington, D. C., November 9. He was widely known for his work on chemical components of essential oils and fruit flavors, and on fruit acids, pungent principles, and pectin. He is credited with a total of 70 or more scientific papers.

Born at Cincinnati, Ohio, Mr. Nelson was a graduate of the University of Illinois and spent a number of years in chemical work in the meat packing industry and in other food work, and as a consulting chemist. He had been doing scientific work in the Department of Agriculture for more than 30 years.

GENERAL ADMINISTRATION

The 56th meeting of the Association of Official Agricultural Chemists was held at the Raleigh Hotel, Washington, D. C., October 28 to 30 inclusive. The attendance was large, 525 members being registered. Over 250 reports and papers were presented. A new section on cosmetics submitted reports on hair preparations, colored make-up preparations, facial preparations, dentifrices, and mouth washes. On October 28, Dr. W. W. Skinner, Associate Chief of the Bureau, as President of the Association discussed "Some Relations of Analytical Science to the Work of the Association of Official Agricultural Chemists."

The following officers were elected for next year: Dr. L. B. Broughton of Maryland, President; J.W. Sale of Washington, D.C., Vice President; Dr. W. W. Skinner, Secretary-Treasurer. Additional members comprising the Executive Committee are G. G. Frary of South Dakota, J.O. Clarke of Chicago, Illinois, and George H. Marsh of Alabama.

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Dr. Henry G. Knight was present at the Fifty-fourth annual convention of the Association of Land-Grant Colleges and Universities held at Chicago, Illinois November 11-13, where he discussed informally the Regional Research Laboratory program.

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The Accounting Office desires to call to the attention of all field stations, that rubber stamps are under General Schedule of Supplies Contract, Item No. 53-S-4901, apparently of the best cushion type, at a cost of 5 cents per line, including handle.

Identical stamps may also be obtained from the Interior Department, Rubber Stamp Section (located in the Agriculture Department Building, Washington,) at 6 cents per line.

Accounts have been received from field offices for rubber stamps at a cost of as much as 50 cents per line, and it is therefore requested that whenever possible your requirements be made known by forwarding "Request for Purchase Order," form No. 1, ace, to the Purchase and Property Section, for rubber stamps or any other miscellaneous office supplies.

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On October 29 S. H. McCrory inspected fiber flax plants at Fargo, North Dakota, and Port Huron, Michigan.

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H. T. Herrick addressed the Milwaukee Section of the American Chemical Society November 22, on the subject of "The New Regional Laboratories of the United States Department of Agriculture for Research on the Utilization of Farm Products."

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WESTERN REGIONAL RESEARCH LABORATORY

Several members of the staff attended the "School of Philosophy for Workers in Agriculture" held in Berkeley, October 23-25. This school was given by the U. S. Department of Agriculture, Division of Program Study and Discussion, Bureau of Agricultural Economics. Roy F. Hendrickson, Director of Personnel, U. S. Department of Agriculture, and Carl F. Taeusch, Head, Division of Program Study and Discussion, Bureau of Agricultural Economics, participated in presenting the program.

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Dr. T. L. Swenson attended a meeting of the Regional Laboratory Directors in Washington, D. C., during the week of November 4. On November 15 he presented a paper entitled "Background, Philosophy and Objectives of the Western Regional Research Laboratory," before the meeting of the Washington Wheat Growers League at Walla Walla, Wash.

Dr. M. J. Blish, Chief, Protein Division, also attended this meeting and presented a paper on "New Uses and Researches for Wheat."

Ray H. Nagel presented a paper entitled "Research on New Uses for Western Agricultural Products" before the Annual Meeting of Western Growers Protective Association in Los Angeles, November 8.

The Administration wing, Laboratory wing, and Service Building of the Western Regional Research Laboratory were formally accepted by the Government on November 1. The staff moved into the building November 7.

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EASTERN REGIONAL RESEARCH LABORATORY

Dr. P. A. Wells, Director, and Dr. J. T. Scanlan of the Oil Division, visited a number of research laboratories of meat packing plants in Chicago and vicinity in connection with work of the Oil and Fat Division. They also visited the research laboratory of the American Meat Institute. Before returning to Philadelphia they visited the Northern Regional Research Laboratory at Peoria and conferred with Officials there.

Dr. J. J. Willaman gave an address entitled "The Work of the Eastern Regional Research Laboratory of the U. S. Department of Agriculture", before members of the Central Pennsylvania Section of the American Chemical Society at State College, Pa., on November 13.

C. W. Murray gave a paper entitled "Report on Arsenic" before the meeting of the Association of Official Agricultural Chemists on October 28, at Washington, D. C.

R. E. Lothrop addressed members of the Pennsylvania League of Women Voters at West Chester, Pa., on October 23, and the student body of Springfield Township High School on October 24, on the work of the Eastern Laboratory.

F. L. Chappell of Hobart, N.Y., manager of Sheffield Company by-products plants, visited the Laboratory on October 19. Mr. Chappell is greatly interested in the Eastern Laboratory's research program on milk products.

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NORTHERN REGIONAL RESEARCH LABORATORY

J. H. Shollenberger and J. J. Curtis were at the Iowa Agricultural Experiment Station on October 21 to 24 to assist in the harvesting and care of agricultural residues for experimental purposes which are being supplied the Laboratory by that Station. Investigation of the use of corncobs for fuel and for poultry litter was also made.

Dr. E. C. Lathrop conferred with officials of the University of Tennessee and others the latter part of October concerning research on plastics from agricultural residues.

J. H. Shollenberger presented a paper "Some Production and Utilization Aspects of the Wheat Situation," before the trisection meeting of the Midwest, Central States, and Cincinnati Sections of the American Association of Cereal Chemists, at Urbana, Illinois, on Nov. 9.

Dr. O. E. May attended the Directors' conference in Washington. He also conferred with officials of the Eastern Regional Research Laboratory concerning the maintenance and operation of the laboratory building, and with representatives of industry and others in New York City regarding the research program of the Northern Regional Research Laboratory having a direct reference to polymerization and synthetic rubber.

Joseph A. Scott, Chief of the Division of Plans and Service, visited the Laboratory in Peoria early in November to discuss plans for the acceptance tests to be run at the Laboratory.

Dr. John C. Cowan conferred with representatives of the University of Illinois, the United States Soybean Industrial Products Laboratory, and the A. E. Staley Manufacturing Company, regarding the research program of the Oil and Protein Division of the Laboratory.

Edward F. Snyder conferred with members of the staff of the Agricultural Byproducts Laboratory at Ames, Iowa, concerning information for and methods of analysis to be used in the research program of the Analytical and Physical Chemical Division of the Laboratory.

Drs. G. E. Hilbert, Roy L. Whistler, Majel M. MacMasters, and Lynferd J. Wickerham, visited the University of Illinois in connection with matters relating to the research program of the Laboratory.

Thomas L. Bailey, Jr., Mechanical Engineer, has been transferred from the Federal Works Agency of Washington, D. C. to the Northern Regional Research Laboratory, in the capacity of Mechanical Superintendent.

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RURAL ELECTRIFICATION RESEARCH

The progress report on the warming of drinking water for livestock has been prepared by F. D. Yung, cooperating agent, stationed at the University of Nebraska.

Professor C. E. Seitz, of the Virginia Polytechnic Institute, called recently and discussed some of the studies being conducted in Virginia in cooperation with the Bureau. He has prepared a brief statement of research work in the Department of Agricultural Engineering of V.P.I., including the cooperative studies in rural electrification.

H. L. Garver attended a conference on Rural Electrification at the University of Ohio on November 1 and 2 and read a paper entitled "The Value of a Coordinated Rural Electrification Research and Educational Program to Agriculture."

Mr. Garver was in Georgia during the week ending November 9. While there he conferred with Mr. Greiner and Professor R. H. Driftmier relative to cooperative studies being conducted at the University of Georgia. He also visited O. A. Brown at Irwinville and discussed the work being conducted there.

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FARM MECHANICAL EQUIPMENT RESEARCH

E. M. Mervine reports from Fort Collins, Colo., the first commercial trial of "mechanically thinning" sugar beets - a system proposed and developed by the Bureau. A farmer in Southern Colorado planted beets with a single seed ball planter and thinned the entire crop without the customary "stoop" labor. His field, as it approaches harvest shows just about a perfect stand of beets; the laborers were enthusiastic as to the ease of thinning, and the farmer saved \$4.50 per acre on his entire crop.

S. W. McBirney has recently been working with E. M. Mervine in testing the commercial possibilities of a harvesting machine which tops the beets in the machine. Thirty-four acres of beets were harvested satisfactorily with this machine. Other tests were made on a ground topper, developed in California, with satisfactory results.

Major O. K. Hedden left the Toledo office November 8 for six months active military duty with the Reserve Officers Corps.

Frank Irons reports the construction and testing of dusting apparatus to determine accurately air flow from the duster nozzles. Several different adapters were made for use with the standard nozzles. The purpose of the adapters is to reduce the turbulence to a minimum to facilitate reliable readings.

L. G. Schoenleber returned to active duty October 16 after several months illness.

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M. E. McCollam, representing the American Potash Institute in the Pacific Coast States conferred with G. A. Cumings on October 31 relative to fertilizer placement problems in California and other western areas. Mr. McCollam called attention to the present confusion in that region relative to methods of fertilizer application because of the lack of research data and suitable distributing machinery.

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U. S. REGIONAL SOYBEAN INDUSTRIAL PRODUCTS LABORATORY, URBANA, ILL.

T. H. Hopper, Senior Chemist and Chief of the Analytical Section at the Soybean Laboratory, was in Washington October 28 to 30 to attend the meetings of the Association of Official Agricultural Chemists.

Among those attending the meetings of the Federation of Paint and Varnish Production Clubs at the Mayflower Hotel in Washington, D. C. October 28 to 30, was Arthur J. Lewis, Chemist at the Soybean Laboratory. At the conclusion of the meetings Mr. Lewis inspected the cooperative paint panels on exposure at the Norfolk Navy Yard.

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Dr. D. H. Wheeler, Senior Chemist and Chief of the Oil Section, attended the division chiefs' conference on oils on October 10 to 12. Others from Urbana attending the various conferences of the Division Chiefs were Dr. A. K. Smith, Chemist, who represented the laboratory at the conferences on protein, plastics, and fibers; Dr. R. T. Milner, Director of the laboratory, at the conferences on analytical work; and W. H. Goss, Chemical Engineer, at the engineering and development conferences.

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Among the visitors to the Urbana Laboratory during October were: Dr. P. J. Anderson, Pathologist in charge of the Tobacco and Vegetable Substation at the Connecticut Agricultural Experiment Station; Dr. Edward Bartow, Professor Emeritus of the University of Iowa, and Drs. S. A. Karjala, C. L. Mehlretter, and R. L. Whistler of the Northern Regional Research Laboratory.

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AGRICULTURAL CHEMICAL RESEARCH

J. L. Heid of the U. S. Fruit and Vegetable Products Station, Weslaco, Texas, attended the meeting of the Physical Science Section of the Texas Academy of Science, San Antonio, Texas, November 8, 1940, and presented a paper on "Observations on the Drying of Grapefruit Cannery Residue for Feed."

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After spending considerable time at Meridian, and Laurel, Miss., where he has been cooperating on the manufacture of granulated sugar from sorghum and on starch investigations, Harlow H. Hall of the Microbiological Section is now in Michigan cooperating with the sugar industry in that section on the bacterial quality of beet sugar.

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Dr. Harry E. Goresline, in charge of the Microbiological Section, has just returned from Raleigh, N.C., where he spent several days conferring with members of the State Agricultural Experiment Station and the Chas. F. Cates Company regarding pickling investigations, and also discussed the personnel program of our field station.

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Dr. Glenn H. Joseph of the California Citrus Growers Exchange, Ontario, Calif., was a visitor to the Food Research Unit recently. Through the Division Dr. Joseph was able to meet Army and Navy medical personnel who were interested in pectin preparations of the Exchange.

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After completion of the season's work at the Meridian, Miss., field station on a process for production of sugar from sorgho, E. K. Ventre and H.H. Hall left the South for beet sugar work. Sam Byall has returned to Washington from Meridian and R. M. Kingsbury has been temporarily assigned to the Houma, La., field station.

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C. A. Fort is at various points in the West where he is engaged on beet sugar investigations.

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C. F. Walton, Jr., recently visited South Carolina at the request of the Extension Service for conferences with reference to the sirup program in that state.

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The 1940 National Beekeeping Conferences, held at Omaha, Nebr., October 22-24, were attended by G. P. Walton, who presented a report of the Honey Utilization Committee on "A Tentative Classification of Honeys for the Bakery Trade." On his return trip Mr. Walton stopped off at Iowa State and Michigan State Colleges, and at Chicago and points in Michigan to confer with research workers and technologists engaged in honey packing and associated industries. At the invitation of Prof. W. F. Coover, he took part in a conference on the newly planned course in Food Technology to be added to Iowa State's curriculum in the near future.

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FARM STRUCTURES RESEARCH

On November 7 Otto E. Brunkow, in charge of the Farmhouse investigations at Madison, Wis., attended the Milwaukee Vocational School where he participated in a panel discussion of American housing problems.

The meeting was attended by about 75 home economics teachers, and representatives of various agencies interested in housing, including U.S.H.A. and Farm Security Administration.

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Dr. Henry J. Barre, stationed at Ames, Iowa has examined some of the steel shelled corn bins in northwestern Iowa. He noted some breaking of the tile used in the foundations and some tendency to use soft or otherwise inferior tile. Monolithic concrete foundations of concrete blocks are somewhat more expensive than tile but should be used for large bins. Most of this year's crop has already been cribbed in that part of Iowa. Circular cribs about 16 feet in diameter and 12 feet high made of wood slat cribbing are quite numerous. Also one finds the driveway of double cribs filled as well as both sides. In view of the high-moisture corn, the drying in such cribs will be questionable and storage difficulties may be expected. Spoilage has already started in some cases. In the experimental cribs, examination shows that the corn in the crib with wind pressure ventilation, is drying well, especially at the center of the crib, which is normally the slowest to dry."

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Plans and specifications have been prepared by P. T. Simons and Mr. A. C. Hudson, at Athens, Ga., for the construction of a new farmhouse and a tenant house to be built by a cooperator near Athens, Ga. Studies of thermal conditions and general livability will be conducted both in the house now occupied by the cooperator and in the new house when completed.

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T. F. Wood of Wilmington, N.C., representing a warehousing company storing large quantities of sugar, called at the office to discuss problems related to control of dampness in stored sugar with Messrs Hukill and Dennis of this Division and Dr. C. F. Walton of the Agricultural Chemical Research Division. As a result of previous suggestions by the Bureau Mr. Wood had taken a large number of readings of temperatures and relative humidity in various parts of the warehouse. He reports that steps taken as the result of preliminary suggestions have improved conditions in parts of the warehouse. On the basis of his records, suggestions were made for solution of the few remaining difficulties.

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Prof. F. C. Fenton of Kansas State College visited the Washington office on October 21 regarding plans for the experimental storage of grain sorghum at the Fort Hays Branch Experiment Station, in which this Bureau and the Kansas State College are cooperating.

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W. R. Swanson has now completed the storing of 2,923 bushels of grain sorghum in connection with these studies. The moisture content of the grain varied from 9.9 to 14.5 percent. It was necessary to artificially wet the driest portion of the grain before storage.

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AGRICULTURAL BY-PRODUCTS LABORATORY, AMES, IOWA

E. A. Stafford of Arthur D. Little, Inc., Cambridge, Mass., spent October 23 at the Agricultural By-Products Laboratory conferring with Dr. Aronovsky and other members of the staff in regard to the nitric acid pulping process.

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Messrs. J. H. Shollenberger, John J. Curtis and E. F. Snyder of the Northern Regional Research Laboratory spent October 23 to 25 at the Agricultural By-Products Laboratory and the Iowa State college conferring with the staff of the laboratory and with members of the college agronomy department.

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A number of display panels showing the work of the Agricultural By-Products Laboratory on plastics, lignin, and pulp from Agricultural residues were exhibited at the National Cornhusking contest held at Davenport, Iowa, October 28-30. These panels formed a part of the larger corn and corn products exhibit prepared at the Iowa State College.

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NAVAL STORES RESEARCH

C. F. Speh conferred with representatives of the Forest Service, and of the Georgia School of Technology, at Atlanta, Ga., on October 9. On October 10 he attended the meeting of the Alabama-West Florida Producers' Association. He also visited naval stores producers at Mobile, Ala., Pensacola, and Jacksonville, Fla. On October 16 and 17 he visited the Naval Stores Station, Olustee, Fla., where he conferred with the station staff and inspected the work of the station.

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On November 4 Mr. Speh went to New York City, to confer with representatives of the Hercules Powder Company, and the Newport Industries, Inc., regarding research on naval stores.

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ENZYME LABORATORY

On November 12, Dr. A. K. Balls attended a dinner given by the New York Section of the American Association of Cereal Chemists. Dr. Balls was the speaker at the meeting which followed. He discussed the work of the Enzyme Research Laboratory with particular reference to recent work done on Lipo-proteins.

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Among the visitors to the Enzyme Laboratory in the past month were Dr. David L. Crawford, President, University of Hawaii; Mr. Robert Rosenbaum of Philadelphia and Puerto Rico; Dr. H. K. Parker of the Wallace and Tiernan Company, Newark, N.J.; Dr. Lloyd H. Almy of the H. J. Heinz Company, Pittsburgh; Dr. Frederick H. Hessel of the Ellis-Foster Company Mt. Clair, W. W. Moss, Jr. of New York City, and

A. K. Smith of the Soybean Laboratory at Urbana.

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Irwin W. Tucker recently made a trip to Charlottesville, Va. where he conferred with Professor J. W. Beams and others regarding the operation of and the work done with ultracentrifuges in the various departments of the University of Virginia.

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The Enzyme Laboratory has recently isolated two new substances in crystalline form. One of them is a substance dissolved out of flour by gasoline, and is behaving like a complicated cystine peptide. The other is a new proteolytic enzyme from papaya latex. It is an entirely different protein from the previously isolated crystalline papain.

PUBLICATIONS APPEARING OUTSIDE THE DEPARTMENT

- BENNETT, C. A. (With F. L. GERDES, Agr. Marketing Service, senior author) Speeding up gin-saws to improve ginning quality and efficiency. Cotton Ginners' Jour. 12(1): 7, 11. Oct. 1940.
- BOYNTON, J. O. Suggestions on gum buying. Naval Stores Rev. 50 (31): 8, Nov. 1940.
- CAMPBELL, H. C. The splitting of shelled peas intended for freezing. West. Canner & Packer - Frozen Foods Recorder 32(8): 49, 50. July, 1940.
- _____ The scalding of cut corn for freezing. West. Canner & Packer - Frozen Foods Recorder 32(9): 51-53, 55. Aug. 1940.
- CROPSEY, M. G., JR. Management of potato storages. North Dakota Agr. College Circular 170: 8. September 1940.
- DODGE, J. R. One hundred years of farmhousing. Southern Planter (11) 4, 18-19. Nov. 1940.
- KNIGHT, H. G. Industrial utilization of southern farm crops. Manufacturers Record - South's Resources Issue, pp. 44-46. Sept. 1940.
- MATLACK, M. B. The fatty constituents of California valencia orange pulp. (Citrus aurantium sinensis L.) Jour. of Organic Chem. 5 (5): 504-507. Sept. 1940.
- MOYER, A. J., UMBERGER, E. J. AND STUBBS, J. J. Fermentation of concentrated solutions of glucose to gluconic acid. Indus. & Engin. Chem. 32(10): 1379-1383. Oct. 1940.
- NOLTE, A. J. and VON LOESECKE, H. W. Chemical and physical characteristics of the petroleum ether soluble material of fresh and canned Florida valencia orange juice. Food Res. 5(5): 457-467. Sept.-Oct., 1940.
- POHLE, W. D. and SPEH, C. F. Detergent action of rosin soaps and fatty acid-rosin soaps. Oil and Soap. 17(10): 214-216. Oct. 1940.
- RABAK, W. Some observations on the materials used in packaging frozen foods. (Abstr.). Paper Trade Jour. 3(9): 80-82. Aug. 1940.
- SPIES, J. R., BERNTON, H. S., and STEVENS, H. The chemistry of allergens. III. The solubility behavior of an active protein picrate from cottonseed. Jour. Amer. Chem. Soc. 62(10): 2793-2799. Oct. 1940.
- WILLAMAN, J. J. What else can we do with vegetables. Natl. Seedsman 7 (4): 6-7, 44. Oct. 1940.

CHANGES IN PERSONNEL

(Recent Appointments - Indefinite or Probationary)

Woodrow W. Cottingham	Skilled Laborer (Winter Haven, Fla.)	Agr. Chem. Res. Div.
Mrs. Margaret H. Mask	Junior Steno (Raleigh, N.C.)	" " " "
William F. Daugherty	Unskilled Laborer (Winter Haven, Fla.)	" " " "
Alfred King	Assistant Messenger	Business Adminis.
Mrs. Aurelia F. Krishan	Junior Clerk-Steno. (Wyndmoor, Pa.)	East. Reg. Res. Lab.
Henry J. Funk	Asst. Clerk-Steno.	" " " "
Charles V. Maurer	Asst. Storekeeper	" " " "
Francis X. J. McCarthy	Asst. Messenger	" " " "
Dwight L. Miller	Assoc. Chemist (Peoria, Ill.)	North. " " "
Sulo A. Karjola	Assoc. Chemist	" " " "
Maxine Watson	Under Lab. helper (Peoria, Ill.)	" " " "
Thos. L. Bailey, Jr.	Mechanical Engr.	" " " "
Theodore A. Moorman	Sr. Steamfitter & Pipefitter (Peoria, Ill.)	" " " "
Audrey Mary MacDonald	Senior Clerk	" " " "
Sidney Swise	Sr. Stationary Boiler Fireman (Peoria, Ill.)	" " " "
William H. Day	" " " "	" " " "
John T. H. Forquer	" " " "	" " " "
Mary T. Gast	Telephone Operator (Peoria, Ill.)	" " " "
Edward A. Fritz	Sr. Electrician (Peoria, Ill.)	" " " "
Lillian A. Nelson	Under Clerk-Typist (Peoria, Ill.)	" " " "
Wesley M. Noble	Asst. Chemist (Albany, Calif.)	West. " " "
Fern E. Swendiman	Asst. Clerk-Steno. (Albany, Calif.)	" " " "
Earl L. Muller	Sr. Steamfitter & Pipefitter (Albany, Calif.)	" " " "
Mrs. Helen M. Macauley	Jr. Clerk-Steno	" " " "
Mrs. Velma F. Trotter	Under Telephone Operator	" " " "
James S. Osborne	Sr. Operating Engineer	" " " "
Leon E. Wener	Asst. Scientific Aid (Urbana, Ill.)	Regional Soybean "
George H. Foster	Collaborator (Lafayette, Ind.)	Rural Elec. Res. Div.

(Recent Appointments - Temporary)

Mrs. Evangeline M. Friedl	Junior Clerk-Stenographer	Business Adminis.
Myrtle P. Lacey	" " Typist	Bus. Adm. (Reg. Lab. Adm.)
	Sr. Stationary Boiler Fireman	
Steven H. Welch	(Albany, Calif.)	West. Reg. Res. Lab.
John P. McCauley	do	" " " "
Eugene F. White	Sr. Operating Engineer (Peoria, Ill.)	North. " " "
Alfred H. Crisp	Sr. Operating Engineer (Peoria, Ill.)	" " " "
Ellen Chin	Junior Clerk-Typist	Bus. Admin (Reg. Lab.)

(Separations)

Ben L. Kaspin	Junior Scientific Aid	Agr. Chem. Res. Div.
Grace R. Yorkdale	Minor Scientific Helper	" " " "
Elnathan K. Nelson	Senior Chemist (Deceased)	" " " "
Felix Berger	Asst. Messenger	
	(To Rural Elec. Admin.)	Business Admin.
Hugh Everett Wilkinson	Machinist's Helper	
	(Stoneville, Miss.)	Cotton Ginning Invs.
Miriam F. Spiwack	Senior Typist (To Extension Service)	Plans and Service
John T. Bowen	Senior Electrical Engineer	" " "
	(Deceased)	
Lou V. Brennan	Junior Clerk-Stenographer	Reg.Res. Lab.(Admin.)
Irvin M. Dreisbach	Guard (Wyndmoor, Pa.)	East.Reg.Res. Lab.
C. Oakford Newman	Asst. Engineering Aide	Structures

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(The following)

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